REMARKS

Claims 2, 3 and 17-35 have been canceled.

Claims 1 and 36-38 have been amended. In compliance with 37 C.F.R. §121(c)(3), a clean version of the entire set of pending claims is being submitted, as is a marked-up version showing changes in the amended claims relative to the previous version of the claims.

Claims 1, 4-16 and 36-38 remain in the application. Of these, claim 1 is an independent apparatus claim and claims 36-38 are independent method claims.

Claims 1-36 are rejected under 35 U.S.C. §112, second paragraph. Claims 1 and 36 have been amended to overcome this rejection. Claims 4-16 depend on the amended claim 1. Claims 2, 3 and 17-35 have been canceled.

Claims 1-38 are rejected under 35 U.S.C. §102(e) as anticipated by Sweezer et al. U.S. Patent No. 6,293,920 (Sweezer '920). Sweezer '920 discloses a first cannula 19 defining a first flow path and a second cannula 21 defining a second fluid path. However, the first and second cannulas define discrete flow paths. That is, the second cannula is not sized and configured to slidably receive at least a portion of the first cannula to form a lumen between the first and second cannulas, the lumen defining a second flow path for transporting blood between a pump and a second predetermined location within the circulatory system of the patient, as defined by the amended independent claims 1 and 36-38 and the associated dependent claims.

Allowance of claims 1, 4-16 and 36-38 is respectfully requested.

Respectfully submitted,

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Marked-Up Version of Amended Claims 1 and 36-38

1 (Amended). A cannulation assembly for providing circulatory support, comprising:

a first cannula defining a first flow path for transporting blood between a pump and a first predetermined location within [the] a circulatory system of a patient; and

a second cannula sized and configured to slidably receive at least a portion of the first cannula to form a lumen between the first and second cannulas, the lumen defining a second flow path for transporting blood between a pump and a second predetermined location within the circulatory system of [a] the patient,

wherein the first and second [flow paths] cannulas are [slidably coupled to one another and] dimensioned to extend, in use, into the respective first and second predetermined locations through a single incision formed in [the] a vascular system of the patient.

36 (Amended). A method for providing circulatory support, comprising:

withdrawing blood from a first predetermined location in [the] a circulatory system of a patient; and

returning the withdrawn blood to a second predetermined location in the circulatory system of the patient,

wherein the steps of withdrawing and returning are performed by providing a cannula assembly comprising

a first cannula defining a first flow path for transporting blood between a pump and a first predetermined location within the circulatory system of a patient; and

a second cannula sized and configured to slidably receive at least a portion of the first cannula to form a lumen between the first and second cannulas, the lumen defining a second flow path for transporting blood between a pump and a second predetermined location within the circulatory system of the patient,

wherein the first and second cannulas are dimensioned to extend, in use, into the respective first and second predetermined locations through a single incision formed in a vascular system of the patient [having a first flow path slidably coupled to a second flow path, wherein the first and second flow paths are dimensioned to extend, in use, respectively into the first and second predetermined locations through a single incision formed in the vascular system of the patient].

37 (Amended). A method for inserting a cannula assembly into a patient, comprising:

forming a single incision in the vascular system of the patient;

providing a cannula assembly [having a first flow path slidably coupled to a second flow path] comprising

a first cannula defining a first flow path for transporting blood between a pump and a first predetermined location within the circulatory system of a patient; and

a second cannula sized and configured to slidably receive at least a portion of the first cannula to form a lumen between the first and second cannulas, the lumen defining a second flow path for transporting blood between a pump and a second predetermined location within the circulatory system of the patient,

wherein the first and second cannulas are dimensioned to extend, in use, into the respective first and second predetermined locations through a single incision formed in a vascular system of the patient;

advancing a distal end of the first [flow path] cannula through the incision to a first predetermined location within the circulatory system of the patient; and

advancing a distal end of the second [flow path] cannula through the incision to a second predetermined location within the circulatory system of the patient.

38 (Amended). A method of circulating fluid through a cannula system [comprising a cannulation assembly including at least two flow paths slidably coupled to each other,] comprising the steps of

(1) inserting the cannulation assembly into a first predetermined location in a body through a vascular incision; the assembly comprising

a first cannula defining a first flow path for transporting blood between a pump and a first predetermined location within the circulatory system of a patient; and

a second cannula sized and configured to slidably receive at least a portion of the first cannula to form a lumen between the first and second cannulas, the lumen defining a second flow path for transporting blood between a pump and a second predetermined location within the circulatory system of the patient,

wherein the first and second cannulas are dimensioned to extend, in use, into the respective first and second predetermined locations through a single incision formed in a vascular system of the patient;

(2) establishing flow communication between a first one of the flow paths and the first predetermined location;

(3) slidably moving a second one of the flow paths into a second predetermined location spaced apart from the first predetermined location;

(4) establishing flow communication between the second flow path and the second predetermined location;

(5) coupling the first and second flow paths to a pump system; and

(6) operating the pump system to transport fluid from the first predetermined location for introduction into the second predetermined location.